

INDEX.

ABBOTT.

ABBOTT, E. L.—Discussion by, 48.
ABBOTT, FRED WALTER.—Elected a Member, 308.
Abbreviations, etc.—Report of Committee to Co-operate in Standardizing, 174.
Accessions to the Library, 17, 108, 138, 178, 219, 253, 317, 359, 458.
ADAMS, ARTHUR.—Elected an Associate Member, 166.
ADGATE, FREDERICK WHITNEY.—Elected an Associate Member, 2.
AHERN, JEREMIAH.—Elected a Member, 212.
AIKEN, W. A.—Discussion by, 130.
AIMS, WALTON IRVING.—Elected a Member, 212.
AINSLIE, JAMES W.—Death announced, 214.
AINSWORTH, DANFORTH HURLBUT.—Death announced, 214.
ALDEN, CHARLES AMES.—Transferred to Grade of Member, 309.
ALEXANDER, ROBERT LEE.—Elected a Junior, 386.
ALLEN, CHARLES METCALF.—Elected an Associate Member, 244.
ALLEN, WILLIAM ANDREW.—Transferred to Grade of Member, 309.
ALLEN, WILLIAM BULLARD.—Elected a Member, 46.
ALMIRALL, RAYMOND FRANCIS.—Elected a Member, 354.
AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.—Correspondence by, 488.
Announcements, 5, 94, 133, 169, 216, 247, 312, 356, 456, 491.
Annual Convention, 36th.—Appointment of Committee of Arrangements for, 246; Minutes of, 347.
Annual Convention, 37th.—Discussion of Time and Place for, 348; Correspondence Relating to Place for, 350; Time and Place Announced, 387, 389.

ANNUAL MEETING.

Annual Meeting.—Minutes of, 43, 51; Excursions and Entertainments at, 87; Attendance at, 87; Appointment of Committee of Arrangements for, 490, 491.
ANTHONY, WALTER LORING.—Elected a Junior, 3.
ARMOUR, CHARLES WEBSTER L.—Elected an Associate Member, 244.
ASSERSON, HENRY R.—Discussion by, 386.
AUSTIN, WILLIAM EUGENE.—Elected a Member, 488.
BABE, CYRUS CATES.—Transferred to Grade of Member, 131.
BABÉ, JOSEPH MANUEL.—Elected a Junior, 245.
BACHMETEW, B.—Address by, 434, 450.
BACKES, WILLIAM JAMES.—Elected a Junior, 245.
BAIRD, HOWARD CARTER.—Transferred to Grade of Member, 47.
BAKER, HUGH COSSART, Jr.—Elected an Associate Member, 212.
BALL, LAURENCE ADAMS.—Elected a Junior, 213.
BAMFORD, WILLIAM BROKAW.—Elected an Associate Member, 355.
BANKER, EDWARD WARREN.—Elected a Junior, 131.
BARNES, FRED ASA.—Elected an Associate Member, 488.
BARNES, MORTIMER GRANT.—Transferred to Grade of Member, 245.
BARROWS, HAROLD KILBRETH.—Elected an Associate Member, 2.
BASSELL, BURR.—Correspondence by, 212.
BASSETT, ROBERT JAY.—Elected an Associate Member, 46.
BATES, JOHN ROSS.—Elected a Junior, 245.
BAXTER, W. J.—Speech at Banquet to English Engineers, 408.

BEARD.

BEARD, E. J.—Correspondence by, 132.
 BELKNAP, JOHN MANSFIELD.—Elected an Associate Member, 212.
 BENSEL, J. A.—On Committee on Entertainment of English Engineers, 217.
 BERGENGREN, FRITZ CARL ANDERS GEORG.—Death announced, 310.
 BEST, JOHN HENRY.—Elected an Associate Member, 244.
 BEUGLER, EDWIN JAMES.—Transferred to Grade of Member, 2.
 BIRKS, ARTHUR HENRY.—Elected a Junior, 167.
 BISHOP, HUBERT KEENEY.—Elected a Member, 354.
 BISSELL, HEZEKIAH.—Nominated as Director, 358, 388.
 BLACKBURN, NATHANIEL TOWNSEND.—Elected a Junior, 309.
 BLACKWELL, FRANCIS OGDEN.—Elected a Member, 354.
 BLAKELEY, G. H.—Discussion by, 354.
 BLISS, GEORGE HENRY.—Elected an Associate Member, 308.
 BLODGETT, ALBERT MORRILL.—Elected a Member, 308.
 BLOSS, RICHARD PARKHURST.—Elected a Member, 2.
 Board of Direction.—Report of, 7, 44, 51; Report of.—On Joint Engineering Building, 44, 59, 99; Resolutions Relative to the Joint Engineering Building, 45, 49; Report of.—On Appointment of Special Committee on "Concrete and Steel Concrete," 44, 58; Resolution Relative to Letter-Ballot for Admission to Society, 246; Resolution Relative to Subscription to Membership in International Engineering Congress, 246.
 BOARDMAN, HAROLD SHERBURNE.—Elected an Associate Member, 46.
 BOECKLIN, WERNER.—Discussion by, 48.
 BOEHMER, MAX.—Resignation accepted, 490.
 BOGART, JAMES PETER.—Death announced, 3.
 BOLLER, A. P.—On Committee on Entertainment of English Engineers, 217.
 BONZANO, M. F.—Correspondence by, 167.
 BOOTH, GEORGE WILLIAM.—Elected an Associate Member, 308.

BOUSCAREN.

BOUSCAREN, LOUIS FREDERIC GUSTAVE.—On Finance Committee, 49; On Committee on International Engineering Congress, 95; Death announced, 387.
 BOWEN, SHERMAN WORCESTER.—Elected an Associate Member, 308.
 BOWLER, FRANK COLBURN.—Elected an Associate Member, 355.
 BOWMAN, AUSTIN L.—Nominated as Director, 358, 388.
 BOWNE, WILLIAM HUNT.—Elected an Associate Member, 488.
 BOWSER, EDMUND HAMILTON.—Elected a Member, 244.
 BRACE, JAMES HENRY.—Paper by, 48; Transferred to Grade of Member, 309.
 BRADY, SAMUEL DUNLAP.—Elected a Member, 308.
 BRENN, CHARLES FERDINAND.—Elected an Associate Member, 212.
 BREUCHAUD, JULES ROWLEY.—Elected a Junior, 386.
 BRILLHART, JACOB HERBST.—Elected a Junior, 386.
 BRINCKERHOFF, H. W.—Discussion by, 354, 487.
 BRINKLEY, MILO HAMILTON.—Elected a Junior, 131.
 BRINSMADE, DANIEL EDWARDS.—Elected an Associate Member, 166.
 BRISLEY, EDWARD BETTS.—Resignation accepted, 490.
 BROOKS, FREDERICK.—On Nominating Committee, 44, 52.
 BROWN, ALFRED THOMAS.—Elected a Junior, 386.
 BROWN, STEPHEN PEARSON.—Elected an Associate Member, 355.
 BROWNE, ERNEST HENRY.—Transferred to Grade of Member, 2.
 BUCHHOLZ, C. W.—On Committee on Entertainment of English Engineers, 217.
 BUCK, R. S.—On Finance Committee, 49; On Committee on Entertainment of English Engineers, 217; Discussion by, 310; Presides at Meeting, 354.
 BUFFINGTON, BENJAMIN THOMAS.—Elected an Associate Member, 308.
 BUGBEE, NEWTON ALBERT KENDALL.—Elected an Associate Member, 355.
 BURDEN, JAMES.—Transferred to Grade of Member, 2.
 BURRAGE, JOHN OTIS.—Elected a Junior, 131.

V

BURROWES.

BURROWES, HARRY GILBERT.—Elected an Associate Member, 46.
BURTON, STANDISH BARRY.—Death Announced, 310.
BUTCHER, WILLIAM LARAMY.—Elected an Associate Member, 212.
BUZZELL, JOSIAH WILLIAM.—Elected an Associate Member, 166.

CAIRD, JAMES MORTON.—Elected an Associate, 355.
CAMERON, JOHN BOBBS.—Elected an Associate Member, 46.
CAMP, W. M.—Discussion by, 308.
CAMPBELL, H. J.—Discussion by, 48.
CARR, ALBERT.—On Nominating Committee, 44, 52; Appointed Teller to Canvass Ballot for Proposed Union Engineering Building, 130.
CARROLL, CHARLES JOSEPH.—Elected an Associate Member, 355.
CARTER, EDWARD C.—On Committee on Universal Exposition, St. Louis, 5.
CARTER, WILLIAM J.—Transferred to Grade of Member, 386.
CARTLIDGE, CHARLES HOPKINS.—Elected a Member, 212.
CASE, JAMES FRANCIS.—Elected a Member, 2.
Cement.—Report of Committee on Uniform Tests of, 44, 55.
CHAMBERLIN, CHESTER HARVEY.—Elected a Member, 354.
CHAMBERS, RALPH HAMILTON.—Transferred to Grade of Member, 167.
CHANUTE, OCTAVE.—On Committee on Entertainment of British Engineers, 217.
CHAPPELL, THOMAS FENNING.—Elected a Member, 354.
CHAUSSE, ALCIDE.—Elected an Associate, 167.
CHURCH, IRVING P.—Correspondence by, 2, 310.
CHURCHILL, PERCIVAL MITCHELL.—Elected an Associate Member, 244.
CILLEY, FRANK H.—Paper by, 310.
CLARK, EDWARD COTMAN.—Elected an Associate Member, 46.
CLARK, ROSCOE NATHANIEL.—Elected an Associate Member, 212.
CLARKE, D. D.—Paper by, 165; Correspondence by, 165.
CLARKE, ST. JOHN.—Elected a Member, 244.
CLERMONT, JOHN BAPTISTE.—Elected an Associate Member, 212; Discussion by, 354.

COE.

COE, DAVID.—Elected a Member, 308.
COFFIN, THEODORE DE LONG.—Elected a Junior, 386.
COHEN, MENDES.—On Committee on Entertainment of English Engineers, 217.
COKEFAIR, FRANCIS ALBERTSON.—Elected an Associate Member, 166.
COLBY, SAFFORD KINHEAD.—Elected an Associate, 2.
COLE, EDWARD SMITH.—Elected an Associate Member, 308.
COLE, HEREBET NICHOLS.—Elected an Associate Member, 2.
"Collapse of a Building During Construction, The," presented and discussed, 214.
COLLIER, B. C.—Appointed Teller to Canvass Ballot for Officers, 44, 51.
COLLINGWOOD, FRANCIS.—Discussion by, 386.
Collingwood Prize.—Award of, 4, 44.
COLLINS, CHARLES EDWIN.—Elected an Associate Member, 130.
COLLINS, RODERICK GREENE, Jr.—Elected a Member, 212.
Committee in Charge of International Engineering Congress.—Appointment of, 49, 50, 95.
Committee of Arrangements for Annual Convention.—Appointment of, 246.
Committee of Arrangements for Annual Meeting.—Appointment of, 490, 491.
Committee on Ballot for Joint Engineering Building.—Appointment of, 50.
Committee on Concrete and Steel-Concrete.—Report of the Board of Direction Relating to the Appointment of, 44, 58; Appointment of, 215, 246.
Committee on Enlargement of Society House.—Appointment of, 490.
Committee on Entertainment of Members of Institution of Civil Engineers.—Appointment of, 217; Report of, 490.
Committee on Finance.—Appointment of, 49.
Committee on Library.—Appointment of, 49.
Committee on Nominations.—Election of, 44, 51; Present List of Nominees, 358, 388.
Committee on Publications.—Appointment of, 49.

COMMITTEE ON CEMENT.

Committee on Uniform Tests of Cement.—Report of, 44, 55.
 Committee on Universal Exposition, St. Louis.—Members of, 5.
 Committee to Co-operate in Standardizing Abbreviations, etc.—Report of, 174.
 Committee to Recommend the Award of Prizes.—Report of, 3, 4, 44, 57; Appointment of, 215.
 "Concrete and Steel-Concrete."—Report of the Board of Direction Relating to the Appointment of a Special Committee on, 44, 58; Appointment of Committee on, 215, 246.
CONN, FRANK WINSLOW.—Elected a Member, 244.
CONSTANCE, EDWARD CARTWRIGHT.—Elected a Junior, 489.
COOPER, THEODORE.—On Committee on Entertainment of English Engineers, 217; Correspondence by, 487.
CORNISH, LORENZO DANA.—Elected a Junior, 167.
CORRIGAN, GEORGE WASHINGTON.—Elected an Associate Member, 355.
CORTHELL, ELMER L.—Correspondence by, 46, 490; On Committee on International Engineering Congress, 95.
COSBY, SPENCER.—Elected a Member, 354.
COVERDALE, W. H.—Discussion by, 46, 132.
COX, LEONARD MARTIN.—Transferred to Grade of Member, 2.
CRAIG, PHILIP INSLEY.—Elected an Associate Member, 46.
CRAIGHILL, WILLIAM P.—On Committee on International Engineering Congress, 95; On Committee on Entertainment of English Engineers, 217; Resolution by, 347; Address by, 348.
CRAVEN, ALFRED.—Presides at Meeting, 46, 165; On Publication Committee, 49; On Committee on Ballot for Joint Engineering Building, 50; On Committee on International Engineering Congress, 95; On Committee of Arrangements for Annual Convention, 246.

CRAWLEY.

CRAWLEY, ERNEST WILLARD.—Elected a Junior, 245.
CREHORE, W. W.—Discussion by, 310.
CROES, J. J. R.—Discussion by, 130; On Committee on Ballot for Joint Engineering Building, 50; On Committee on Entertainment of English Engineers, 217.
CROSBY, WILSON.—Death announced, 490.
CROWELL, FOSTER.—Presides at Meeting, 132; On Committee on Entertainment of English Engineers, 217.
CULGIN, GUY WHITMORE.—Elected an Associate Member, 308.
CUMMINGS, NOAH.—Elected an Associate Member, 2.
CUNNINGHAM, JOSEPH HOOKER.—Transferred to Grade of Member, 47.
Current Engineering Literature, 24, 113, 146, 189, 229, 269, 325, 366, 468, 499.
CURREY, CHARLES WHITE.—Elected a Member, 130.
CURTIS, F. S.—Elected Vice-President, 45, 85.
CURTIS, VARNUM PIERCE.—Elected an Associate Member, 488.
DAHLSTRÖM, KARL P.—Address by, 449.
DAILEY, JOHN ALEXANDER.—Elected an Associate, 308.
DALLIS, PARK ANDREW.—Elected an Associate Member, 244.
DALTON, JOHN JEROME.—Elected an Associate Member, 488.
DARRACH, CHARLES G.—Correspondence by, Relating to Samples of Concrete Made During Freezing Weather, 130.
DAVIES, WILLIAM GOMER.—Elected a Junior, 47.
DAVIS, JAMES LYFORD.—Elected an Associate Member, 212.
DAVIS, JOSEPH B.—On Nominating Committee, 44, 54.
DAVISON, GEORGE S.—On Publication Committee, 49; On Committee on International Engineering Congress, 95; On Committee of Arrangements for Annual Convention, 246.
DEAN, ARTHUR WARREN.—Elected a Member, 212.
DEFORREST, GEORGE THOMPSON.—Death announced, 48.

DE LOBEL.

DE LOBEL, LOICQ.—Address by, 433.
 DESPARD, DUNCAN LEE.—Resignation Accepted, 490.
 DEUTSCHBEIN, HARRY JOHNSON.—Elected a Junior, 489.
 DEYD, S. L. F.—Elected Vice-President, 45, 85; On Finance Committee, 49; Presides at Meeting, 129, 387, 490; On Committee on Entertainment of English Engineers, 217.
 DIAMANT, ARTHUR H.—Paper by, 307.
 DICKE, EDWARD CHRISTIAN.—Elected a Junior, 245.
 DIEBITSCH, EMIL.—Discussion by, 48.
 DILLARD, JOHN LEA.—Elected an Associate Member, 244.
 DILLENEBECK, CLARK.—Elected a Member, 244.
 DIXON, DEFOREST HALSTED.—Elected an Associate Member, 46.
 DOSE, HENRY FREDERICK.—Elected a Member, 2.
 DOUGAN, JAMES.—Elected an Associate Member, 130.
 DOWNES, ALFRED KIMBALL.—Elected an Associate Member, 46.
 DUDLEY, CHARLES TARRELL.—Elected a Junior, 309.
 DUDLEY, P. H.—Discussion by, 308.
 DUNCAN, LINDSAY.—Elected an Associate Member, 46.
 DUNHAM, H. F.—Discussion by, 167, 488.
 DUNLAP, FREDERIC CLARK.—Elected a Member, 244.
 DUNN, WILLIAM ROBERT.—Elected an Associate Member, 166.
 EASTWOOD, JOHN THOMPSON.—Transferred to Grade of Member, 309.
 EDWARDS, DEAN GRAY.—Elected a Junior, 386.
 EHRLINGHAGEN, OSWALD.—Address by, 433.
 EITZEN, ARTHUR ROBERT.—Elected a Junior, 309.
 ELLIOTT, JAMES RUTHERFORD.—Transferred to Grade of Member, 167.
 ELLIS, JOHN W.—Elected a Director, 45, 85; On Committee of Arrangements for Annual Meeting, 491.
 ELLSWORTH, EMORY ALEXANDER.—Elected a Member, 244.
 ELY, JOHN STANTON.—Elected an Associate Member, 130.
 EMERSON, GUY CARLETON.—Elected a Member, 212.

ENDICOTT.

ENDICOTT, MORDECAI T.—On Committee on Universal Exposition, St. Louis, 5; On Committee on International Engineering Congress, 95.
 FAIRCHILD, SAMUEL EDWARDS, Jr.—Elected an Associate Member, 488.
 FALES, FRANK LEWIS.—Elected an Associate Member, 166.
 FAENHAM, CHARLES HENRY.—Elected an Associate Member, 244.
 FAY, FREDERIC HAROLD.—Transferred to Grade of Member, 2.
 FERGUSON, JAMES EASTON.—Elected an Associate Member, 244.
 FICKES, EDWIN STANTON.—Transferred to Grade of Member, 489.
 FIEBEGER, G. J.—On Committee on Entertainment of English Engineers, 217; Speech at Banquet to English Engineers, 406.
 "Filtration Works of the East Jersey Water Company, at Little Falls, New Jersey, The," awarded the Thomas Fitch Rowland Prize, 4, 44.
 Finance Committee.—Appointment of, 49.
 FISCHER, GUILLERMO GUSTAVO.—Elected a Junior, 47.
 FISHER, CLARK.—Death announced, 3.
 FISHER, EDWIN A.—Nominated as Director, 358, 388.
 FISHER, WILBUR HOWARD.—Elected a Junior, 489.
 FITZGERALD, DESMOND.—On Committee on Entertainment of English Engineers, 217.
 FOLLANSBEE, ROBERT.—Elected a Junior, 386.
 "Footbridge for Building the Cables of the New East River Bridge, The," awarded the Collingwood Prize, 4, 44.
 FORD, WILLIAM GRIFFING.—Elected a Member, 354.
 FORGIE, JAMES.—Elected a Member, 354.
 FORT, EDWIN JOHN.—Transferred to Grade of Member, 386.
 FORTIN, SIFROY JOSEPH.—Transferred to Grade of Member, 489.
 FOSTER, MOFTIMER.—Elected an Associate Member, 244.
 FOX, HENRY HEYWOOD.—Elected a Junior, 309.

FRANCIS.

- FRANCIS, G. B.—Discussion by, 130; Lecture by, 166.
 FRANCIS, WALTER JOSEPH.—Transferred to Grade of Member, 167.
 FRAZIER, JAMES.—On Committee on Universal Exposition, St. Louis, 5.
 "Freezing as an Aid to Excavation in Unstable Material," presented and discussed, 48.
 FRENCH, ARTHUR WILLARD.—Transferred to Grade of Member, 489.
 FRENCH, FREDERICK REGINALD.—Elected a Member, 308; Death announced, 489.
 FRIZELL, J. P.—Correspondence by, 212.
 FULLER, ANDREW DANIEL.—Elected an Associate Member, 2.
 FULLER, CARL HAMILTON.—Elected an Associate Member, 46.
 FULLER, GEORGE WARREN.—Awarded the Thomas Fitch Rowland Prize, 4, 44; Discussion by, 244; Transferred to Grade of Member, 245.
 FULLER, HARRY.—Elected a Member, 308.
 FURMAN, JOB ROCKFIELD.—Elected a Member, 488.
 FYFE, JAMES LINCOLN.—Elected a Member, 354.
 GALBREATH, WILLIAM OTTO.—Elected an Associate Member, 166.
 GARDNER, GEORGE CLINTON.—Death announced, 310.
 GARDNER, WILLIAM MONTGOMERY.—Elected a Member, 488.
 "Gatun Dam, The," presented and discussed, 214.
 GAYLER, ERNEST ROTTECK.—Elected an Associate Member, 166.
 "General Methods for the Calculation of Statically Indeterminate Bridges, as used in the Check Calculations of Designs for the Manhattan Bridge and the Blackwell's Island Bridge, New York," presented, 310.
 GIFFORD, G. E.—Discussion by, 487.
 GIFFORD, HARRY VAN VLECK.—Resignation accepted, 4.
 GILLETTE, HALBERT POWERS.—Elected a Member, 212.
 GILMAN, CHARLES.—Elected a Junior, 489.
 GIVEN, RICHARD ALEXANDER.—Elected an Associate Member, 46.

GOLDING.

- GOLDING, JOHN FRENCH.—Elected an Associate, 47.
 GOODRICH, E. P.—Paper by, 167; Discussion by, 167.
 GOULD, E. SHERMAN.—Discussion by, 212.
 GOVE, WILLIAM GRANVILLE.—Elected an Associate Member, 46.
 GOW, CHARLES RICE.—Elected an Associate Member, 244.
 GOWEN, CHARLES S.—Elected a Director, 45, 85; On Finance Committee, 49; Discussion by, 130, 212.
 GREEN, FRED MAY.—Elected an Associate Member, 166.
 GREEN, RUTGER BLEECKER.—Transferred to Grade of Member, 309.
 GREENE, ALBERT EMERSON.—Elected an Associate Member, 212.
 GREENE, G. S., Jr.—On Committee on Entertainment of English Engineers, 217.
 GREENE, JOSEPH NORTON.—Death announced, 309.
 GREENLAW, RALPH WELLER.—Elected a Junior, 213.
 GREENSFELDER, ALBERT PRESTON.—Elected a Junior, 213.
 GREGORY, LUTHER ELWOOD.—Elected a Member, 166.
 GREINER, J. E.—On Committee on Concrete and Steel-Concrete, 246.
 GRIFFIN, ARTHUR JAMES.—Elected an Associate Member, 488.
 GRIMES, EDWIN LINCOLN.—Elected a Member, 130.
 GROVER, NATHAN CLIFFORD.—Elected an Associate Member, 130.
 GRUNSKY, C. E.—On Committee on Entertainment of English Engineers, 217.
 GUGERTY, EDWARD JOSEPH.—Elected a Junior, 213.
 HAINES, HENRY S.—On Committee on International Engineering Congress, 95; Speech at Banquet to English Engineers, 400; Address by, 421.
 HALE, HERBERT MILLER.—Elected a Junior, 386.
 HALL, ROBERT ELLIOT.—Elected a Junior, 309.
 HAMLIN, HOMER.—Elected a Member, 212.
 HAMLIN, RALPH.—Elected a Junior, 3.

HAMMOND.

HAMMOND, ALONZO JOHN.—Elected a Member, 244.
 HANAVAN, WILLIAM LAWRENCE.—Elected a Junior, 489.
 HANDBURY, THOMAS HENRY.—Elected a Member, 46.
 HANNA, JOHN HUNTER.—Transferred to Grade of Member, 386.
 HARBY, ISAAC.—Awarded the Collingwood Prize, 4, 44.
 HARDIN, ABRAHAM TRACY.—Elected an Associate Member, 130.
 HARDY, EDWARD DANA.—Elected a Member, 354.
 HARRIS, ELMO G.—Correspondence by, 307.
 HARRIS, VAN ALEN.—Transferred to Grade of Member, 309.
 HARRISON, CHARLES L.—Paper by, 211; Discussion by, 212, 214; On Committee of Arrangements for Annual Meeting, 491.
 HARRISON, E. W.—Discussion by, 212.
 HARROD, BENJAMIN.—On Committee on International Engineering Congress, 95; On Committee on Entertainment of English Engineers, 217.
 HASELTON, GAGE.—Elected a Junior, 213.
 HASSEKARL, JOSEPH FREDERICK.—Transferred to Grade of Member, 386.
 HATCH, JAMES NOBLE.—Elected a Member, 488.
 HATT, W. K.—On Committee on Concrete and Steel-Concrete, 246.
 HAWKESWORTH, JOHN.—Elected a Junior, 309.
 HAWKHURST, ROBERT, Jr.—Elected an Associate Member, 308.
 HAZEN, ALLEN.—On Committee on Entertainment of English Engineers, 217; Paper by, 243; Discussion by, 243.
 HEMMING, DUNKIN WIRGMAN.—Transferred to Grade of Member, 245.
 HERING, RUDOLPH.—On Committee on Entertainment of English Engineers, 217; Presides at Meeting, 487.
 HERMANY, CHARLES.—Elected President, 45, 85; Address by, 45, 85, 347, 422; On John Fritz Medal Board of Award, 49; On Committee on Entertainment of English Engineers, 217; Presides at Meeting, 347, 422; Speech at Banquet to English Engineers, 392.

HERSCHEL.

HERSCHEL, CLEMENS.—On Committee on Entertainment of English Engineers, 217.
 HEWES, VIRGIL HENRY.—Elected a Member, 46; Discussion by, 167, 354.
 HILDENBRAND, W.—Discussion by, 310.
 HILDER, FRAZER CROSWELL.—Elected a Junior, 309.
 HILLER, JOHN AUGUSTUS.—Elected an Associate Member, 308.
 HITCHMAN, JACKSON COLBORN.—Elected an Associate Member, 355.
 HODGMAN, HARRY.—Elected an Associate Member, 130.
 HOFF, OLAF.—On Committee on Concrete and Steel Concrete, 246.
 HOFFMANN, ROBERT.—Transferred to Grade of Member, 309.
 HOGAN, JOHN PHILIP.—Elected a Junior, 489.
 HOHL, LEONHARD JOHN.—Elected a Member, 354.
 HOLCOMBE, JOSEPH GALES.—Elected a Member, 212.
 HOLDREDGE, HENRY ATKINSON.—Elected an Associate Member, 488.
 HOLMAN, M. L.—On Committee on International Engineering Congress, 95; Nominated as Vice-President, 358, 388.
 HONENS, FREDERICK WILLIAM.—Transferred to Grade of Member, 245.
 HOOD, JOHN MIFFLIN, Jr.—Elected a Junior, 245.
 HOPKINS, GEORGE GALLAGHER, Jr.—Elected a Junior, 3.
 HORN, FRANK C.—Discussion by, 212.
 HORSTMAN, JOSEPH PROSPER.—Elected an Associate Member, 488.
 HORTON, GEORGE TERRY.—Elected a Member, 166.
 HORTON, ROBERT ELMER.—Elected an Associate Member, 488.
 HOVEY, O. E.—Discussion by, 354.
 HOWARD, CLEMENT JOHN.—Elected a Junior, 309.
 HOWE, HARRY NORTHRUP.—Elected a Junior, 489.
 HOWE, W. B. W.—Correspondence by, 354.
 HOWES, RALPH HOLT.—Elected a Junior, 47.
 HOYT, JOHN CLAYTON.—Elected an Associate Member, 213.
 HUBBELL, CLARENCE WILLIAM.—Transferred to Grade of Member, 2.

HUBBELL.

- HUBBELL, GEORGE SCOTT.—Elected an Associate Member, 244.
- HUERGO, L. A.—Address by, 433.
- HUMPHREY, RICHARD LEWIS.—Transferred to Grade of Member, 213.
- HUMPHREYS, ALEX. C.—On Committee on Entertainment of English Engineers, 217; Speech at Banquet to English Engineers, 410.
- HUNICKE, WILLIAM AUGUST.—Elected an Associate Member, 130.
- HUNT, CHARLES WARREN.—On Library Committee, 49; Elected Secretary, 50; On Committee on Ballot for Joint Engineering Building, 50; On Committee on International Engineering Congress, 95; On Committee on Entertainment of English Engineers, 217; On Committee of Arrangements for Annual Convention, 246; On Committee of Arrangements for Annual Meeting, 491.
- HUNT, ROBERT W.—On Committee on International Engineering Congress, 95; Speech at Banquet to English Engineers, 419.
- HUNT, RUFUS CAMERON.—Elected a Member, 354.
- HUNTER, LEROY LITTLEFIELD.—Elected a Junior, 3.
- HUNTING, EUGENE NATHAN.—Elected a Junior, 386.
- HUNTINGTON, GEORGE DANFOORTH.—Elected an Associate Member, 488.
- HUTCHINGS, JACOB BACON, Jr.—Elected a Junior, 309.
- HUTCHINSON, CARY TALCOTT.—Transferred to Grade of Member, 131.
- "Installation of a Pneumatic Pumping Plant, The," presented and discussed, 307.
- Institution of Civil Engineers.—Appointment of Committee on Entertainment of Members of, 217; Announcement Relative to Entertainment of Members of, 310; Visit of Members of, 390; Banquet to Members of, 392; Report of Committee on Entertainment of Members of, 490
- International Engineering Congress.—Report of Special Committee on, 3, 44, 57; Appointment of Committee in Charge of, 49, 51, 95; Announcements Relating to,

INTERNATIONAL.

- 95, 134, 170, 247; Resolution of the Board of Direction Relative to Subscription to Membership in, 246, 389; Resolution of the Board of Direction, Relative to the Price of Publications of the, 389; Minutes of Meetings of, 421, 438; Reports of Chairmen of Sections of, 438; Report of Secretary of, 444; Resolutions of Thanks Adopted by the Committee in Charge of, 455.
- IVES, EDWARD BERNARD.—Death announced, 3.
- JACKSON, ROSCOE B.—Resignation accepted, 50.
- JACKSON, WILLIAM.—On Committee on Universal Exposition, St. Louis, 5; On Library Committee, 49.
- JACOBS, CHARLES MATTATHIAS.—Elected a Member, 212.
- JACOBS, ROBERT HYDE.—Elected an Associate Member, 213.
- JOHNSON, L. M.—On Committee on Entertainment of English Engineers, 217; Death announced, 489.
- JOHNSON, LEWIS JEROME.—Correspondence by, 354; Transferred to Grade of Member, 386.
- JOHNSTON, LUTHER ELMAN.—Elected a Member, 309.
- JOHNSTON, CLARENCE THOMAS.—Elected a Member, 308.
- JOHNSTON, JOHN PARRY.—Transferred to Grade of Associate Member, 386.
- JOHNSTONE, WILLIAM BARD.—Elected an Associate Member, 213.
- Joint Engineering Building.—Report of Board of Direction on, 44, 59, 99; Correspondence Relating to the, 45, 50, 61; Resolutions of the Board of Direction Relative to the, 45, 49, 63; Appointment of Committee on Ballot for, 50; Tellers Appointed to Canvass Ballot on, 129; Report of Tellers Appointed to Canvass Ballot on, 131.
- JONES, THOMAS JOHN.—Elected an Associate Member, 244.
- JONES, WILLIAM HENRY.—Elected a Member, 212.
- KAHN, GUSTAVE EDMUND.—Elected a Junior, 309.

KEEFER.

KEEFER, THOMAS C.—On Committee on Entertainment of English Engineers, 217.
 KEITH, H. C.—Discussion by, 488.
 KELLY, WILLIAM.—Elected an Associate Member, 46.
 KENLY, EDWARD MARION.—Elected a Member, 212.
 KENNEDY, J. J.—On Committee on Entertainment of English Engineers, 217.
 KIEFFER, STEPHEN EPHRAIM.—Elected an Associate Member, 355.
 KLEINSCHMIDT, HENRY SCHWING.—Elected a Junior, 131.
 KLOSSOWSKI, THEODORE JULIUS.—Elected an Associate Member, 166.
 KNAP, JOSEPH M.—Elected Treasurer, 45, 85; On Committee on International Engineering Congress, 95; Nominated as Treasurer, 358, 388.
 KOPS, JULIAN DE BRUYN.—Transferred to Grade of Member, 2.
 KOWER, HERMANN.—Elected a Member, 354.
 KREUGER, IVAR.—Elected an Associate Member, 488.
 KUCHLING, EMIL.—On Committee on Universal Exposition, St. Louis, 5; Discussion by, 212; Nominated as Vice-President, 358, 388.
 LA CHICOTTE, H. A.—Appointed Teller to Canvass Ballot for Proposed Union Engineering Building, 130.
 LACKEY, OSCAR FRANCIS.—Elected an Associate Member, 213.
 LA FORGE, FREDERICK WILLIAM.—Elected a Member, 354.
 "Lake Cheesman Dam and Reservoir, The," presented and discussed, 211.
 LAMB, ERNEST AVERY.—Elected an Associate Member, 308.
 LAMB, RICHARD.—Discussion by, 490.
 LANDRETH, WILLIAM B.—Nominated as Director, 358, 388.
 LANE, FREDERICK VAN ZANDT.—Elected a Junior, 167.
 LANG, OTTO HEINRICH.—Elected a Member, 354.
 LARRABEE, WILLIAM DOMINICK.—Elected a Member, 354.
 LASLEY, CHARLES ORTON.—Elected an Associate Member, 213.
 LATCHA, JACOB ALBERT.—Death announced, 490.

LATERAL.

"Lateral Earth Pressure and Related Phenomena," presented and discussed, 167.
 LAVELLE, THOMAS MONAHAN.—Elected an Associate Member, 308.
 LAVIS, F.—Discussion by, 46, 132.
 LEAKE, BOUDINOT GAGE.—Elected a Junior, 3.
 LEATHER, BASIL HENRY.—Elected an Associate, 244.
 LE BARON, J. FRANCIS.—Paper by, 490.
 LEFFLER, BURTON RUTHERFORD.—Elected an Associate Member, 166.
 LEONARD, H. R.—On Nominating Committee, 44, 53.
 LESLEY, ROBERT W.—Discussion by, 130; On Committee on Concrete and Steel-Concrete, 246.
 Letter-Ballot for Admission.—Resolution of the Board of Direction Relative to Revision of, 246.
 LEWIS, E. C.—On Library Committee, 49.
 LEWIS, LUTHER HAMMOND.—Elected an Associate Member, 166.
 LEWIS, NELSON P.—Elected a Director, 45, 85; On Library Committee, 49; On Committee on Entertainment of English Engineers, 217.
 LEWIS, SAMUEL JAMES.—Elected a Junior, 489.
 Library.—Accessions to the, 17, 108, 138, 178, 219, 253, 317, 359, 458, 494.
 Library Committee.—Appointment of, 49.
 LINDENTHAL, GUSTAV.—Discussion by, 308, 310; Paper by, 310.
 LIPSEY, THOMAS EUGENE LEARD.—Elected an Associate Member, 166.
 LLIWELLYN, F. T.—Discussion by, 214, 354.
 "Location of the Knoxville, La Follette and Jellico Railroad, of the Louisville and Nashville System, The," presented and discussed, 132.
 LOGAN, WILLIAM SEELEY.—Elected an Associate Member, 166.
 LOVELL, WALTER DANVILLE.—Elected a Member, 212.
 LOVETT, GEORGE FREDERICK.—Elected an Associate Member, 308.
 LOW, EMILE.—Correspondence by, 132.
 LOWINSON, O.—Discussion by, 214.
 LUCAS, GEORGE LATMORE.—Elected an Associate Member, 488.

LUDLOW.

- LUDLOW, J. L.—On Committee to Recommend the Award of Prizes, 215.
 LUDLOW, JUSTIN WYMAN.—Elected a Junior, 167.
 LUND, ROBERT LEATHAN.—Elected an Associate Member, 213.
 LYMAN, RICHARD.—Discussion by, 167.
 LYMAN, RICHARD ROSWELL.—Elected an Associate, 213.
 LYON, HENRY LLOYD.—Elected a Member, 46.
 MACCRACKEN, GEORGE GERE.—Elected an Associate Member, 47.
 MACDONALD, ARCHIBALD ANGUS.—Elected an Associate Member, 355.
 MACDONALD, CHARLES.—On Committee on Entertainment of English Engineers, 217.
 MACDONALD, H. P.—Discussion by, 214, 354, 488.
 MACGREGOR, R. A.—Discussion by, 488.
 MACKSEY, HENRY VINCENT.—Elected a Member, 212.
 MACNAIR, HENRY JAMES.—Elected an Associate Member, 244.
 MACOMB, JOHN DE NAVARRE, Jr.—Elected an Associate Member, 355.
 McBURNEY, HENRY.—Elected a Junior, 3.
 McCALLA, RICHARD CALVIN.—Death announced, 309.
 McCONNELL, IRA WELCH.—Elected an Associate Member, 488.
 McCULLOCH, ROBERT AUSTEN.—Elected an Associate Member, 308.
 McCURDY, HARRY SHERWOOD ROYDEN.—Elected an Associate Member, 308.
 McDONALD, HUNTER.—On Publication Committee, 49; On Committee on International Engineering Congress, 95; On Committee of Arrangements for Annual Convention, 246; Discussion by, 308.
 McGEE, VAN NORMAN.—Death announced, 355.
 MCINTIRE, THOMAS BURTON.—Elected a Junior, 131.
 McKEOWN, THOMAS.—Death announced, 309.
 McLEAN, JOSEPH PATTON.—Elected an Associate Member, 130.

MADDEN.

- MADDEN, JOHN HENRY.—Elected an Associate Member, 213.
 MAGRUDER, FRANK CECIL.—Elected a Junior, 309.
 MALTBY, F. B.—Correspondence by, 212.
 MANTER, RALPH BARTON.—Elected an Associate Member, 244.
 MARINDIN, HENRY LOUIS.—Death announced, 167.
 MARSHALL, ROBERT BRADFORD.—Elected a Member, 212.
 MARX, CHARLES D.—Elected a Director, 45, 85.
 MATHESON, ERNEST GEORGE.—Elected an Associate Member, 244.
 MATHEWS, ISAAC.—Transferred to Grade of Member, 131.
 MAY, THEODORE MARTIN.—Elected an Associate, 489.
 MAYELL, ALBERT JEFFERSON.—Elected a Junior, 131.
 MAYER, JOSEPH.—Discussion by, 310; Presides at Meeting, 385.
 MEAD, CHARLES ADRIANCE.—Transferred to Grade of Member, 2.
 MELICK, N. A.—Discussion by, 488.
 MELVILLE, GEORGE W.—On Committee on International Engineering Congress, 95.
 Membership.—Additions, 21, 111, 141, 184, 223, 259, 321, 361, 462, 497; Changes of Address, 142, 185, 225, 261, 321, 362, 464; Resignations, 22, 112, 268; Deaths, 23, 112, 188, 221, 268, 324, 365, 467, 498.
 MERRILL, OGDEN.—Elected an Associate Member, 47.
 MERRILL, ROBERT HALL.—Elected a Junior, 213.
 METCALF, WILLIAM.—On Committee on International Engineering Congress, 95; On Committee on Entertainment of English Engineers, 217.
 "Method Used by the Railroad Commission of Texas, Under the Stock and Bond Law, in Valuing Railroad Properties," presented and discussed, 46.
 MEYERS, ALFRED MOYER.—Elected an Associate Member, 355.
 MILLER, ALEXANDER MACOMB.—Death announced, 355.
 MILLER, FRANK.—Elected a Member, 354.
 MILLER, JAMES IMBRIE.—Resignation accepted, 4.

XIII

MILLER.

- MILLER, RUDOLPH PHILIP.—Transferred to Grade of Member, 2.
 Minutes of Meetings of the Board of Direction, 3, 49, 50, 132, 168, 215, 246, 311, 388, 389, 490.
 Minutes of the Meetings of the International Engineering Congress, 421, 438.
 Minutes of Meetings of the Society, 1, 3, 43, 46, 48, 51, 129, 132, 165, 167, 211, 214, 243, 307, 310, 347, 354, 385, 387, 487, 490.
 MITCHELL, CHARLES HAMILTON.—Transferred to Grade of Member, 2.
 MODJESKI, RALPH.—Elected a Director, 45, 85; On Library Committee, 49.
 MOIR, ERNEST WILLIAM.—Elected a Member, 308.
 MOISSEIFF, LEON S.—Paper by, 310.
 MOLERA, EUSEBIO JOSEPH.—Elected a Member, 354.
 MONAHAN, JOHN JOSEPH.—Elected an Associate, 244.
 Monthly List of Recent Engineering Articles of Interest, 24, 113, 146, 189, 229, 269, 325, 366, 468, 499.
 MOORE, JOHN EDWIN.—Elected a Member, 354.
 MOORE, ROBERT.—On Committee on Universal Exposition, St. Louis, 5; On Committee on Entertainment of English Engineers, 217; Speech at Banquet to English Engineers, 397; Presides at Meeting of International Engineering Congress, 438.
 MORAN, D. E.—Discussion by, 48.
 MORISON, WILLIAM SMITH.—Elected an Associate Member, 166.
 MORROW, JAY JOHNSON.—Transferred to Grade of Member, 131.
 MOSES, JOHN CRANCH.—Transferred to Grade of Member, 213.
 MOSS, ROBERT FAULKNER.—Elected a Junior, 386.
 MOULD, GEORGE ALEXANDER HUTCHINGS.—Elected an Associate Member, 488.
 MUNROE, JAMES P.—Speech at Banquet to English Engineers, 403.
 NAUMAN, GEORGE.—Elected a Member, 212.
 NAYLOR, E. B.—Resignation accepted, 50.
 NEAL, CLARENCE ADKINS.—Elected a Junior, 489.

NEILSON.

- NEILSON, GEORGE HARRISON.—Elected a Member, 354.
 NETHERCUT, EDGAR S.—Elected a Member, 166.
 "New Method of Tunneling as Applied to the Construction of the 14 and 15-foot Bay Ridge Sewer, A," presented and discussed, 385.
 NEWBROUGH, WILLIAM.—Elected a Member, 166.
 NEWELL, HERBERT DAMON.—Elected an Associate Member, 488.
 NICHOLS, CLARENCE HICKS.—Elected an Associate Member, 166.
 NICHOLSON, G. B.—On Nominating Committee, 44, 55.
 NOBLE, ALFRED.—Presides at Meeting, 1, 43, 48, 51, 214; On Committee on Ballot for Joint Engineering Building, 50; On Committee on Entertainment of English Engineers, 217.
 NOBLE, CLARENCE WARREN.—Elected an Associate Member, 47.
 Nominations Committee on.—Election of, 44, 51; Presents List of Nominees, 358, 388.
 NORTH, EDWARD P.—Presides at Meeting, 211; On Committee on Entertainment of English Engineers, 217.
 NUEBLING, EMIL LOUIS.—Elected a Member, 488.
 NUNN, PAUL N.—Elected a Member, 308.
 O'BRIEN, JOSEPH H.—Discussion by, 214, 354.
 O'CONNOR, CORNELIUS JOSEPH.—Elected a Junior, 131.
 OL'COTT, E. E.—On Committee on Entertainment of English Engineers, 217.
 "On Sedimentation," presented and discussed, 243.
 OPDYKE, HENRY GORTON.—Elected an Associate Member, 308.
 O'Rourke, J. F.—Discussion by, 354.
 OSBORNE, GEORGE FREDERICK FOLGER.—Elected an Associate Member, 488.
 OSGOOD, JOSEPH O.—On Publication Committee, 49; On Committee on International Engineering Congress, 95; On Committee of Arrangements for Annual Convention, 246.

OWEN.

- OWEN, JAMES.—Presides at Meeting, 243.
- PAINES, CHARLES.—On Committee on Entertainment of English Engineers, 217.
- PALMER, JOHN ELDEN.—Elected a Member, 244.
- PARKER, JOHN CASTLEREAGH.—Elected a Junior, 489.
- PARKER, WILLIAM POOL.—Elected an Associate Member, 355.
- PARMLEY, WALTER C.—Lecture by, 387.
- PARSONS, H. DE B.—Paper by, 214.
- PARSONS, WILLIAM BARCLAY.—On Committee on Entertainment of English Engineers, 217.
- PATCH, WALTER WOODBURY.—Elected an Associate Member, 308.
- PATERSON, HARRY THOMAS.—Elected an Associate Member, 47.
- PEARSONS, G. W.—Correspondence by, 244.
- PEGRAM, GEORGE H.—On Publication Committee, 49; On Committee on International Engineering Congress, 95; Presides at Meeting, 167, 310; On Committee on Entertainment of English Engineers, 217; On Committee of Arrangements for Annual Convention, 246.
- PERRING, HENRY GARFIELD.—Resignation accepted, 4.
- PERRY, JOHN PRINCE HAZEN.—Elected a Junior, 386.
- PFLEIFER, H. J.—On Committee on Universal Exposition, St. Louis, 5.
- PFLEIFFER, GEORGE WHITFIELD.—Elected an Associate Member, 355.
- "Phenomenal Land Slide, A," presented, 165.
- PHILLIPS, RICHARD HARVEY.—Elected a Member, 488.
- PHILLIPS, THEODORE CLIFFORD.—Elected an Associate Member, 130.
- PHILLIPS, WILLIAM HALE.—Elected a Junior, 386.
- PICKETT, WILLIAM D.—Correspondence by relating to Joint Engineering Building, 45, 61.
- PIERCE, JAMES WILSON.—Elected an Associate Member, 47.
- PIERSON, GEORGE S.—Nominated as Director, 358, 388.
- PILLSBURY, GEORGE BIGELOW.—Elected an Associate Member, 488.
- POPE, JOHN HORTON.—Elected a Member, 488.
- POPE, WILLARD.—Elected a Member, 355.
- PORTER, WILLIAM W.—Speech at Banquet to English Engineers, 415.
- POST, GEORGE B.—On Committee on International Engineering Congress, 95.
- POTTER, WILLIAM BANCROFT.—Elected a Member, 130.
- PRATT, ROBERT J.—Resignation accepted, 246.
- PRATT, WILLIAM ARTHUR.—Death announced, 310.
- Prizes, Committee to Recommend the Award of.—Report of, 3, 4, 44, 57; Appointment of, 215.
- "Probable Wind Pressure Involved in the Wreck of the High Bridge over the Mississippi River, on Smith Avenue, St. Paul, Minn., August 20th, 1904," presented and discussed, 487.
- PROUTY, EDWARD NATHAN.—Elected an Associate Member, 47.
- Publication Committee.—Appointment of, 49.
- PUGH, MARSHALL ROGERS.—Elected an Associate Member, 488.
- QUINBY, EDWIN RUFUS.—Elected a Member, 212.
- QUINN, RICHARD.—Elected a Member, 130.
- RAINBOW, JOHN ROWORTH.—Elected an Associate Member, 2.
- RAMSEY, JOSEPH, Jr. On Committee on International Engineering Congress, 95; On Committee on Entertainment of English Engineers, 217.
- "Rational Form of Stiffened Suspension Bridge, A," presented and discussed, 310.
- RAYMOND, WILLIAM G.—Correspondence by, 132.
- RAYNOR, CLARENCE WEBSTER.—Elected an Associate Member, 166.
- REA, SAMUEL.—On Committee on Entertainment of English Engineers, 217.
- REABURN, DEWITT LEE.—Elected an Associate Member, 166.

REBER.

- REBER, HENRY LINTON.—Elected a Member, 212.
 "Reclamation of River Deltas and Salt Marshes, read and discussed, 490.
 REDLICH, CARL.—Elected a Member, 308.
 REED, H.—Discussion by, 48.
 REED, WENDELL MONROE.—Elected a Member, 355.
 REED, WILLIAM WARD.—Death announced, 47.
 Report of Committee on Entertainment of English Engineers, 490.
 Report of Committee on Uniform Tests of Cement, 44, 55.
 Report of Committee to Co-operate in Standardizing Abbreviations, etc., 174.
 Report of Committee to Recommend the Award of Prizes, 3, 4, 44, 57.
 Report of Secretary of International Engineering Congress, 444.
 Report of Tellers Appointed to Canvass Ballot on Proposed Union Engineering Building, 131.
 Report of Tellers on the Vote for Officers, 45, 54.
 Report of the Board of Direction, 7, 44, 51.
 Report of the Board of Direction on Joint Engineering Building, 44, 59, 99.
 Report of the Board of Direction Relating to the Appointment of a Committee on "Concrete and Steel-Concrete," 44, 58.
 Report of the Secretary, 14, 15, 44, 51.
 Report of the Special Committee on International Engineering Congress, 3, 44, 57.
 Report of the Treasurer, 16, 44, 51.
 Report Relating to the Appointment of a Special Committee on Concrete and Steel-Concrete, 44, 58.
 Reports of Chairmen of Sections of International Engineering Congress, 438.
 Resolution of Thanks Adopted by Committee in Charge of International Engineering Congress, 455.
 Resolution of Thanks at the Annual Convention, 348.
 Resolution of Thanks Tendered to Paul A. Seurot by the Board of Direction, 490.
 Resolution of the Board of Direction Relative to Revision of Letter-Ballot for Admission, 246.

RESOLUTION.

- Resolution of the Board of Direction Relative to Subscription to Membership in International Engineering Congress, 246, 389.
 Resolution of the Board of Direction Relative to the Price of the Publications of the International Engineering Congress, 389.
 Resolutions of the Board of Direction Relative to the Joint Engineering Building, 45, 49.
 REYNERS, J. V. W.—On Committee on Entertainment of English Engineers, 217.
 RICHARDSON, B. FRANK.—Death announced, 167.
 RICHMOND, JULIAN PIERRE WILLIAM.—Elected a Junior, 47.
 RICKETTS, LOUIS DAVIDSON.—Elected a Member, 355.
 RICKETTS, PALMER C.—On Committee on International Engineering Congress, 95.
 RIEGNER, WALLACE BERKELEY.—Elected a Member, 308.
 RIFFLE, FRANKLIN.—On Nominating Committee, 44, 55.
 ROBB, LOUIS ADAMS.—Elected an Associate Member, 355.
 ROBBINS, ALLAN APPLETON.—Transferred to Grade of Member, 309.
 ROBERTS, ALFRED WHEELER.—Elected a Junior, 167.
 ROBERTS, HARRY ASHTON.—Elected a Junior, 167.
 ROBERTS, NATHANIEL.—Correspondence by, 214.
 ROBINSON, A. A.—On Committee on Entertainment of English Engineers, 217.
 ROBINSON, GEORGE LOOMIS.—Elected a Junior, 167.
 ROBINSON, HARRY HAYES.—Elected an Associate Member, 213.
 ROOD, H. M.—Appointed Teller to Canvass Ballot for Officers, 44, 51.
 ROSENZWEIG, ALFRED.—Death announced, 48.
 ROUNDY, EUGENE PERONNEAU.—Elected an Associate Member, 2.
 Rowland Prize.—Awarded of, 4, 44.
 RUNYON, WILLIAM KEEPER.—Elected an Associate Member, 355.
 RUSSELL, S. BENT.—Discussion by—488.
 SACKETT, ARTHUR JOHNSON.—Elected a Junior, 131.

ST. LOUIS.

St. Louis Engineers' Club.—Correspondence by, 46.
SANBORN, JAMES FORREST.—Elected an Associate Member, 213.
SANDERS, WILLIAM HORATIO.—Elected a Member, 46.
SAUNDERS, W. L.—On Committee on Entertainment of English Engineers, 217.
SAWYER, JACOB HERBERT.—Resignation accepted, 4.
SAYERS, EDWARD LAWRENCE.—Elected a Junior, 47.
SCARBOROUGH, FRANCIS WINTHROP.—Transferred to Grade of Member, 47.
SCHAFFER AMOS.—Elected an Associate Member, 47.
SCHAUB, J. W.—On Committee on Concrete and Steel Concrete, 246.
SCHEUERMANN, HUGO JULIUS.—Elected an Associate Member, 488.
SCHMITT, E.—Paper by, 1.
SCHNEIDER, C. C.—Discussion by, 214, 354; On Committee on Entertainment of English Engineers, 217; On Committee on Concrete and Steel-Concrete, 246; Presides at Meeting, 307; Paper by, 354; Nominated as President, 358, 388.
SCHOSZBERGER, OTTO F.—Address by, 435, 450.
SCHÜLE, FRANCOIS.—Address by, 450.
SCHULTZ, CHARLES.—Elected a Junior, 386.
SCOFIELD, GLENN MASON.—Elected a Member, 308.
SCOTT, CHARLES BRUCE.—Elected an Associate Member, 47.
SCRIPTURE, ARTHUR MARQUIS.—Transferred to Grade of Member, 2.
SEAMAN, HENRY B.—Discussion by, 354.
SEARS, THOMAS BARTLETT.—Elected an Associate Member, 355.
SEARS, WALTER HERBERT.—Elected a Member, 355.
 Secretary.—Report of, 14, 15, 44, 51; Election of, 50.
SEUBOT, PAUL ALBERT.—Transferred to Grade of Member, 386; Resolution of Thanks to, 490.
SHANER, HARRY LINDEN.—Elected an Associate Member, 488.
SHANKS, THOMAS PEARMAN.—Death announced, 47.
SHELLEY, OSWALD PROCTER.—Elected a Junior, 167.

SHEPHERD.

SHEPHERD, FRANK CUMMINGS.—Elected an Associate Member, 355.
SHEPHERD, MORRIS R.—Nominated as Director, 358, 388.
SHERTZER, TYRELL BRADBURY.—Elected an Associate Member, 355.
SHIMA, T.—Address by, 452.
SHIRREFFS, RUBEN.—Death announced, 310.
SKIFF, FREDERIC JAMES V.—Address by, 424.
SLEEPER, GEORGE EDWARD.—Elected a Member, 46.
SMITH, AUGUSTUS.—Discussion by, 354.
SMITH, BENJAMIN BURGH.—Death announced, 48.
SMITH, CHESTER WASON.—Elected an Associate Member, 355.
SMITH, J. WALDO.—Discussion by, 212; On Committee on Entertainment of English Engineers, 217; On Committee of Arrangements for Annual Meeting, 491.
SMITH, LLOYD BOWN.—Elected an Associate Member, 166.
SMITH, STEWART KEDZIE.—Elected a Member, 166.
SNOW, FRANK HERBERT.—Transferred to Grade of Member, 213.
SNYDER, BAIRD, Jr.—Elected a Member, 130.
SNYDER, FREDERIC ANTES.—Elected an Associate Member, 244.
 Society House.—Purchase of Land for Extension of, 166, 168; Appointment of Committee on Enlargement of, 490.
 "Some Notes on the Creeping of Rails," presented and discussed, 308.
SOPER, GEORGE A.—Discussion by, 244.
SOUDER, HARRISON.—Elected a Member, 2.
SPALDING, WALTER JAMES.—Elected a Junior, 386.
SPEAR, WALTER EVANS.—Elected an Associate Member, 47.
 Special Committee on International Engineering Congress.—Report of, 3, 44, 57.
 Speeches at Banquet to English Engineers, 392.
SPENCER, HERBERT.—Elected a Junior, 47.

SPENCER.

SPENCER, JOHN CLARK.—Transferred to Grade of Member, 489.
 SPRAGUE, EDWIN LORING, Jr.—Elected a Junior, 245.
 SPRAGUE, FRANK JULIAN.—Elected a Member, 244.
 STANTON, R. B.—Discussion by, 167.
 STARBUCK, DAVID ARNOLD.—Elected a Junior, 387.
 STEECE, EMMET ABNER.—Transferred to Grade of Member, 131.
 STEPHEN VINCENT IGNATIUS.—Elected an Associate, 489.
 STERN, E. W.—Discussion by, 354.
 STEVENS, F. S.—Discussion by, 308.
 STEVENSON, WILLIAM FREEMAN.—Elected an Associate Member, 355.
 STILLWELL, L. B.—On Committee on International Engineering Congress, 95.
 STONE, EVERETT EDWARD.—Elected a Member, 212.
 STORROW, CHARLES STORER.—Death announced, 214.
 STORROW, SAMUEL.—Transferred to Grade of Member, 131.
 STREHLOW, OSCAR EMIL.—Transferred to Grade of Member, 309.
 STRICKLER, GRATZ BROWN.—Transferred to Grade of Member, 386.
 STROBEL, CHARLES L.—On Committee to Recommend the Award of Prizes, 215.
 STRONG, JAMES BOORMAN.—Elected an Associate Member, 355.
 STUART, JOSEPH THOMPSON.—Elected a Member, 212.
 "Substructure of the Marsh River Bridge," presented and discussed, 130.
 SUHR, OTTO BRUNO.—Elected a Member, 244.
 SWANKER, JOHN EDWARD.—Elected a Member, 212.
 SWENSSON, EMIL.—On Committee on Concrete and Steel-Concrete, 246.
 SWINDELLS, JOSEPH SPRINGER.—Elected an Associate Member, 130.
 TAGGART, RALPH CONE.—Elected an Associate Member, 355.
 TAIT, J. G.—Discussion by, 46, 48, 132.
 TALBOT, A. N.—On Committee on Concrete and Steel-Concrete, 246.

TALBOT.

TALBOT, EARLE.—Elected a Junior, 387.
 TALCOTT, HARRY RANDOLPH.—Elected a Member, 355.
 TAYLOR, BENJAMIN HENRY.—Elected a Member, 212.
 TAYLOR, SELWYN MELLON.—Death announced, 48.
 TAYLOR, W. D.—Paper by, 132.
 TEICHMAN, FRANK.—Elected a Member, 355.
 Tellers.—Appointed to Canvass Ballot for Election of Officers, 44, 51; Report of.—On Election of Officers, 45, 84; Appointed to Canvass Ballot for Proposed Union Engineering Building, 12.; Report of.—On Proposed Union Engineering Building, 131.
 TEMPLE, JOHN C.—Appointed Teller to Canvass Ballot for Proposed Union Engineering Building, 130.
 "Theory and Formulas for the Analytical Computation of a Three-Span Suspension Bridge with Braced Cable," presented and discussed, 310.
 "Theory of the Spherical Dome with a Homogeneous Surface, and of the Framed Dome; Also Notes on the Construction of Masonry and Metal Domes," presented, 1.
 THOMAS, GEORGE E.—Correspondence by, 48.
 THOMPSON, CLARENCE HARD.—Elected an Associate Member, 308.
 THOMPSON, R. A.—Paper by, 46.
 THOMSON, ALEXANDER, Jr.—Elected an Associate Member, 47.
 THOMSON, ERNEST BURSLEM.—Transferred to Grade of Member, 245.
 THOMSON, T. KENNARD.—Discussion by, 48.
 THORP, RICHARD FENWICK.—Elected an Associate Member, 355.
 TIERNAN, AUSTIN KING.—Elected an Associate Member, 355.
 TIGHE, JAMES LAWRENCE.—Transferred to Grade of Member, 245.
 TILDEN, C. J.—Correspondence by, 214.
 TINGLEY, GEORGE CURTIS.—Death announced, 309.
 Treasurer.—Report of, 16, 44, 51.
 TRETTER, GUSTAV ADOLPH.—Elected a Member, 166.

TROTTER.

TROTTER, A. W.—Appointed Teller to Canvass Ballot for Officers, 44, 51.

TSUJI, TARO.—Transferred to Grade of Member, 131.

TUCKER, HERMAN FRANKLIN.—Elected an Associate Member, 488.

TULLOCK, ALONZO J.—Death announced, 309.

TURNER, C. A. P.—Paper by, 487.

TURNER, WILLIS TUBBS.—Elected an Associate Member, 488.

UMSTEAD, CHARLES HENRY.—Transferred to Grade of Associate Member, 213.

Union Engineering Building *See* Joint Engineering Building.

Universal Exposition, St. Louis.—Members of Committee on, 5.

VAN ALSTYNE, H. A.—On Nominating Committee, 44, 53.

VAN DE GREYN, ENGEL BERT.—Elected a Junior, 387.

VAN CLEVE, AARON HOWELL.—Transferred to Grade of Member, 386.

VAN HORNE, JOHN G.—Appointed Teller to Canvass Ballot for Proposed Union Engineering Building, 129.

VAN ORNUM, J. L.—On Committee on Universal Exposition, St. Louis, 4, 5.

VAN SANDICK, R. A.—Address by, 451.

VERRILL, GEORGE ELLIOTT.—Elected a Member, 130.

VINTON, THOMAS MACINTIRE.—Elected an Associate Member, 47.

VOYNOW, CONSTANTINE BORISSON.—Elected an Associate Member, 308.

WACHTER, CHARLES LUCAS.—Elected an Associate Member, 355.

WAGNER, SAMUEL TOBIAS.—Appointed Teller to Canvass Ballot for Proposed Union Engineering Building, 130; On Committee to Recommend the Award of Prizes, 215; Paper by, 308; Discussion by, 488.

WAIT, GUY B.—Correspondence by, 214.

WALKER, CLEMENT ISAAC.—Transferred to Grade of Member, 213.

WALKER, GEORGE JOHNSON.—Elected a Junior, 489.

WALKER.

WALKER, JAMES WILSON GRIMES.—Elected a Member, 355.

WALLACE, HAROLD ULMER.—Elected a Member, 488.

WALLACE, JOHN F.—On Committee on Universal Exposition, St. Louis, 5; On Committee on Entertainment of English Engineers, 217. "Walworth Sewer, Cleveland, Ohio, The," presented, 387.

WARD, C. D.—Paper by, 214; Discussion by, 214.

WARMAN, FREDERICK CONOVER.—Transferred to Grade of Member, 213.

WATSON, WALTER.—Correspondence by, 132.

WATSON, WILLIAM P.—Correspondence by, 132.

WEBB, WALTER LORING.—Transferred to Grade of Member, 213.

WEBSTER, GEORGE S.—Elected a Director, 45, 85; On Committee of Arrangements for Annual Meeting, 491.

WEGMANN, EDWARD.—Discussion by, 212, 307.

WEST, OSCAR JAMES.—Elected a Member, 213.

WESTON, R. S.—Discussion by, 244.

WESTOVER, HENRY CHRISTOPHER.—Elected a Junior, 387.

WHEELER, EDWARD TRUE.—Elected a Member, 488.

WHISKEMAN, J. P.—Discussion by, 214.

WHITBECK, LEE FIELD.—Elected a Junior, 489.

WHITE, FRANK GEORGE.—Elected an Associate Member, 489.

WHITE, JAMES GILBERT.—Elected a Member, 130.

WHITE, Sir WILLIAM.—Speech at Banquet to English Engineers, 393; Address by, 425, 445, 452.

WHITFIELD, JAMES EDWARD.—Elected a Member, 130.

WHITTEMORE, D. J.—On Committee on Entertainment of English Engineers, 217.

WICKES, JOSEPH LEE.—Elected an Associate Member, 130.

WILCOCK, FREDERICK.—Discussion by, 354.

WILCOX, FRANK LESLIE.—Elected a Member, 309.

WILD, HERBERT JOSEPH.—Paper by, 130; Elected an Associate Member, 166.

XIX

WILEY.

WILEY, WILLIAM H.—On Committee on Entertainment of English Engineers, 217.
WILGUS, HERBERT SEDGWICK.—Transferred to Grade of Associate Member, 386.
WILGUS, WILLIAM J.—On Finance Committee, 49; On Committee on Entertainment of English Engineers, 217.
WILLIAMS, CHARLES PAGE.—Transferred to Grade of Member, 386.
WILLIAMS, G. S.—Discussion by, 212.
WILLIAMS, PARLEY LYCURGUS.—Elected an Associate Member, 308.
WILLIAMS, WALTER SCOTT.—Elected an Associate Member, 166.
WILSON, EVERETT BROOMALL.—Transferred to Grade of Member, 489.
WISE, COLIN REED.—Elected a Member, 166.
WITMER, JOSEPH FRANKLIN.—Elected a Member, 212,
WOLF, JULIUS HERMAN GEORGE.—Transferred to Grade of Member, 167.

WOOD.

WOOD, WINTHROP BARRETT.—Elected an Associate Member, 166.
WOODARD, SILAS H.—Paper by, 211; Transferred to Grade of Member, 386.
WOODARD, WILKIE.—Elected an Associate Member, 213.
WOODS, ANDREW ALFRED, JR.—Elected an Associate Member, 213.
WORCESTER, J. R.—On Committee on Concrete and Steel-Concrete, 246; Correspondence by, 354.
WORTHINGTON, CHARLES.—Correspondence by, 354.
WRIGHT, JOSEPH.—Elected an Associate Member, 489.
YATES, WILLIAM HENRY.—Elected a Junior, 47.
YOUNG, EDDY ELBERT.—Elected an Associate Member, 2.
ZINN, GEORGE ARTHUR.—Elected a Member, 46.
ZORN, GEORGE WASHINGTON.—Elected an Associate Member, 489.